

INSPECTION AND MAINTENANCE CHECKLIST

OP4013-1 REV 2-05 **NETWORK TRANSFORMER MAINTENANCE REPORT** For use with NU Preventive Maintenance Manual section U1

1. PHYSICAL STRUCTURE

A. Structure Type <input type="checkbox"/> MH <input type="checkbox"/> VLT <input type="checkbox"/> CustVLT <input type="checkbox"/> PullBox <input type="checkbox"/> SvcBox <input type="checkbox"/> HEX	B. Structure # or Address # if Customer Vault	C. Street D. Nearest Intersection	E. Town F. State G. AWC H. CCC
I. Cover Type	1. <input type="checkbox"/> Round <input type="checkbox"/> Square <input type="checkbox"/> Rectangle	2. <input type="checkbox"/> Vented <input type="checkbox"/> Solid	3. Width ____ in. x Length ____ in.
J. Neck Opening & Depth in inches	1. Opening Diameter ____ in	2. Depth of Neck ____ in	3. Number of Openings ____
L. Structure dimensions in feet & inches	1. Width ____ ft ____ in	2. Length ____ ft ____ in	3. Height ____ ft ____ in
M. Structure Construction Type 1. <input type="checkbox"/> Concrete <input type="checkbox"/> Precast <input type="checkbox"/> Brick	N. Vault <input type="checkbox"/> Street <input type="checkbox"/> Building <input type="checkbox"/> Enclosure <input type="checkbox"/> Roof <input type="checkbox"/> Sidewalk <input type="checkbox"/> Alley <input type="checkbox"/> Padmount <input type="checkbox"/> Other		

2. STRAY VOLTAGE TEST (For guidance refer to Work Practice M4-WP-3038)

A. Test Performed: <input type="checkbox"/> No <input type="checkbox"/> Yes	1. Voltage Present: <input type="checkbox"/> No <input type="checkbox"/> Yes	2. Voltage found: _____ Volts	3. Corrected: <input type="checkbox"/> No <input type="checkbox"/> Yes
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3. WATER / SLUDGE CONDITIONS ☐ No water, does not apply (For guidance refer to TD223)

A. Unusual Odor: <input type="checkbox"/> No <input type="checkbox"/> Yes	B. Oil Sheen: <input type="checkbox"/> No <input type="checkbox"/> Yes	C. Water Discoloration <input type="checkbox"/> No <input type="checkbox"/> Yes	D. Pumping required: <input type="checkbox"/> No <input type="checkbox"/> Yes
E. Water Height ____ ft ____ in	F. Sludge Height ____ ft ____ in	G. Cleaned (Vendor): _____ Date ____/____/____	

4. INSPECTION PURPOSE

A. <input type="checkbox"/> Maintenance Inspection <input type="checkbox"/> Major Inspection <input type="checkbox"/> Factory Test <input type="checkbox"/> Install Inspection & Test <input type="checkbox"/> Special <input type="checkbox"/> Load Reading & Inspection

5. CABLE/CONNECTIONS (For guidance refer to NUMP U2,U3,U4,U6)

MAINTENANCE REQUIRED	NO	YES	IF YES, EXPLAIN IN COMMENTS BELOW	NO	YES
A. Primary Cable, (Splice, Tracking, or Support)			B. Asbestos Arc-Proofing present in Structure		
C. PILC present in Structure (identify by Circuit)			D. Leaking Potheads		
E. Secondary Cable			F. Leaking Termination (Stuffing) Box		
G. Asbestos or Varnished Cambric on Secondary			H. Sec. Network take Amp Readings (Limiters blown)		
I. Faulty Electrical Ground Connections			J. Does Network Main have limiter		
K. Secondary Bus <input type="checkbox"/> No <input type="checkbox"/> Yes 1. Covered <input type="checkbox"/> Uncovered <input type="checkbox"/> 2. Maintenance Required <input type="checkbox"/> No <input type="checkbox"/> Yes L. Secondary Ring <input type="checkbox"/> No <input type="checkbox"/> Yes					

6. DRAWINGS/MAPS (For guidance refer to Work Practice M4-WP-3013)

VERIFICATION REQUIRED	NO	YES	IF NO, REDLINE CORRECTIONS ON UNDERGROUND MAPS AND DRAWINGS	NO	YES
A. Structure correctly located on Underground Map to the street or field location and North Arrow correctly oriented			B. Duct Banks, Windows and Knock-outs drawn correctly		
C. Occupied, Vacant & Plugged Ducts drawn correctly			D. Primary Circuits Cables drawn in correct ducts		
E. Switches, Splices & other devices drawn correctly			F. Transformer Wiring drawn correctly		
G. Cables with Asbestos identified by Circuit or Secondary			H. Crabs, Limiters, Bus Bars, etc. drawn correctly		
I. Secondary & Service Cables drawn in correct ducts			J. Sump, Pump, Drain drawn correctly		
K. Take Photographs of Structure Walls, Floor, Ceiling, and Equipment <input type="checkbox"/> North <input type="checkbox"/> East <input type="checkbox"/> South <input type="checkbox"/> West <input type="checkbox"/> Floor <input type="checkbox"/> Ceiling <input type="checkbox"/> Equipment					
L. Were Infrared Pictures Taken <input type="checkbox"/> No <input type="checkbox"/> Yes (For guidance refer to Work Practice M4-WP-3013)					

7. STRUCTURE CONDITION (For guidance refer to Work Practice M4-WP-3013)

MAINTENANCE REQUIRED	NO	YES	IF YES, EXPLAIN IN COMMENTS BELOW AND TAKE PHOTOGRAPHS OF DEFECTS	NO	YES
A. Frame broken or Grating hinges broken			B. Beams exposed or corroded		
C. Ducts dropped / damaged			D. Roof deteriorating (spalling, flaking) / cracked		
E. Slabs defective / concrete deteriorated			F. Walls or Floor deteriorating (spalling, flaking) / cracked		
F. Pulling eyes present in structure			H. Pulling eyes bent / corroded		
I. Sump, Pump, Drain <input type="checkbox"/> None			J. Debris or Obstructions		

Continued on reverse side –

NETWORK TRANSFORMER MAINTENANCE REPORT

8. NETWORK TRANSFORMER (Company Owned) (For guidance refer to NUMP U1) (Use form OP4013-6 for Non-Network Transformers)

TRANSFORMER UNIT # CIRCUIT # SYSTEM VOLTS =	H.V. CONN	L.V. CONN	TYPE OF COOLING		MANUFACTURER	SERIAL #
	VOLTAGE RATING	KVA RATING	TEMP. RISE @ KVA %		IMPEDANCE @ KVA	TYPE OF OIL
	H.V. TAPS AVAILABLE				PRESENT TAP SETTING	<input type="checkbox"/> OIL LEVEL
	PCB Tag Present: <input type="checkbox"/> No <input type="checkbox"/> Yes 1. If YES, is oil \geq 50 ppm PCB: <input type="checkbox"/> No <input type="checkbox"/> Yes 2. Non- PCB <input type="checkbox"/> Oil Sample Taken <input type="checkbox"/>					
H.V. TERMINAL CHAMBER	CABLE ENTRANCE <input type="checkbox"/> Top <input type="checkbox"/> Bottom		INSULATION OF CHAMBER		RATED CABLE VOLTAGE KV	
	NUMBER OF POSITIONS <input type="checkbox"/> 3 POS <input type="checkbox"/> 2 POS		TYPE OF OIL <input type="checkbox"/> OIL LEVEL		RATED SWITCH VOLTAGE KV	
H.V. SWITCH	PCB Tag Present: <input type="checkbox"/> No <input type="checkbox"/> Yes 1. If YES, is oil \geq 50 ppm PCB: <input type="checkbox"/> No <input type="checkbox"/> Yes 2. Non- PCB <input type="checkbox"/> Oil Sample Taken <input type="checkbox"/>					
PROTECTOR <input type="checkbox"/> DUSTPROOF <input type="checkbox"/> SUBMERSIBLE	MANUFACTURER	MANUFACTURER TYPE	CONT. AMP RATING		RATED VOLTS	SERIAL #
	FUSE STYLE NO.	MASTER RELAY TYPE	PHASING RELAY TYPE		OPERATING MECH. NO.	

9. MAINTENANCE CHECKLIST / GENERAL MECHANICAL AND ELECTRICAL

<input type="checkbox"/> GASKETS	<input type="checkbox"/> FUSES	<input type="checkbox"/> SPRINGS	<input type="checkbox"/> BARRIERS	<input type="checkbox"/> MOTORS	<input type="checkbox"/> CORROSION	<input type="checkbox"/> LAMPS	<input type="checkbox"/> MOTOR GEAR
<input type="checkbox"/> CURRENT CONTACTS	<input type="checkbox"/> AUX. RELAY CONTACTS	<input type="checkbox"/> BUMPERS	<input type="checkbox"/> OVERHEATING	<input type="checkbox"/> SHUNT TRIP	<input type="checkbox"/> LOOSE CONNECTION	<input type="checkbox"/> PROTECTOR MECH. OPERATION	<input type="checkbox"/> RESISTOR

10. DATA COLLECTION INSTRUCTIONS:

ENTER AS DATA IN UPPER BOX	(AS FOUND DATA)	TIME OF DAY	AMBIENT TEMP	PROTECTOR COUNTER	
ENTER AS DATA IN LOWER BOX	(AS LEFT DATA)				

SECONDARY AMPS			
PHASE	1-G-A	2-R-B	3-W-C
LEG 1			
LEG 2			
LEG 3			
LEG 4			
LEG 5			
LEG 6			
TOTAL			
DEMAND MAXIMUM			
DEMAND PRESENT			

PRIMARY SWITCH POSITION <input type="checkbox"/> GRD <input type="checkbox"/> CLOSED <input type="checkbox"/> OPEN	PROTECTOR SWITCH POSITION <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED <input type="checkbox"/> AUTOMATIC
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RELAYS	
MASTER RELAY OVER VOLTAGE CLOSE	V V
MASTER RELAY REVERSE-CURRENT TRIP	A A
PHASING RELAY OVER – VOLTAGE CLOSE	V V

DEVICE	PRESSURES	OIL				
		OIL DIELECTRIC <input type="checkbox"/> 877 <input type="checkbox"/> 1816	LEVEL	COLOR	NEUT. NO.	TEMPERATURE
TRANSFORMER	PSI	KV				° C PEAK
	PSI	KV				° C PRESENT
PRIMARY SWITCH	PSI	KV				
	PSI	KV				
PROTECTOR	PSI					
	PSI					

VOLTAGE Ø TO GROUND	BUSS/PROTECTOR OPEN			BUSS/PROTECTOR CLOSED			TRANSFORMER/PROTECTOR OPEN		
	1-G-A	2-R-B	3-W-C	1-G-A	2-R-B	3-W-C	1-G-A	2-R-B	3-W-C

Comments

Inspected by:

Date

Work Order Number